

# FlyCAM UART SYNTAX 1.4

## FIGs

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Reviewed by:

| Control Byte        |                |                      |         |   |   |   |   |
|---------------------|----------------|----------------------|---------|---|---|---|---|
| Initiate / Complete | Control / Data | Machine / Controller | Command |   |   |   |   |
| 0                   | 0              | 0                    | 0       | 0 | 0 | 0 | 0 |

| Data Transfer Procedure |                  |      |      |
|-------------------------|------------------|------|------|
| Step                    | Command          | Byte |      |
| 1                       | ICM SET VELOCITY | 0000 | 0001 |
| 2                       | DATA             | DDDD | DDDD |
| 3                       | DATA             | DDDD | DDDD |
| 4                       | DATA             | DDDD | DDDD |
| 5                       | DATA             | DDDD | DDDD |
| 6                       | CCM SET VELOCITY | 1000 | 0001 |

| Machine Command Codes |                  |      |      |
|-----------------------|------------------|------|------|
| State                 | Command          | Byte |      |
| ICM                   | RESERVED         | 0000 | 0000 |
| ICM                   | START            | 0000 | 0001 |
| ICM                   | STOP             | 0000 | 0010 |
| ICM                   | EMERGENCY STOP   | 0000 | 0011 |
| ICM                   | SET VELOCITY     | 0000 | 0100 |
| ICM                   | SET ACCELERATION | 0000 | 0101 |
| ICM                   | SET JERK         | 0000 | 0110 |
|                       |                  |      |      |
| CCM                   | RESERVED         | 1000 | 0000 |
| CCM                   | START            | 1000 | 0001 |
| CCM                   | STOP             | 1000 | 0010 |
| CCM                   | EMERGENCY STOP   | 1000 | 0011 |
| CCM                   | SET VELOCITY     | 1000 | 0100 |
| CCM                   | SET ACCELERATION | 1000 | 0101 |
| CCM                   | SET JERK         | 1000 | 0110 |

| Controller Command Codes |          |      |      |
|--------------------------|----------|------|------|
| State                    | Command  | Byte |      |
| ICC                      | RESERVED | 0010 | 0000 |
| ICC                      | ERROR    | 0010 | 0001 |
|                          |          |      |      |
| CCC                      | RESERVED | 1010 | 0000 |
| CCC                      | ERROR    | 1010 | 0010 |

| Machine Data Codes |                            |      |      |
|--------------------|----------------------------|------|------|
| State              | Command                    | Byte |      |
| IDM                | RESERVED                   | 0100 | 0000 |
| IDM                | SEND VELOCITY              | 0100 | 0001 |
| IDM                | SEND ACCELERATION          | 0100 | 0010 |
| IDM                | SEND JERK                  | 0100 | 0011 |
| IDM                | SEND LOWER DISPLACEMENT X  | 0100 | 0100 |
| IDM                | SEND LOWER DISPLACEMENT Y  | 0100 | 0101 |
| IDM                | SEND UPPER DISPLACEMENT X  | 0100 | 0110 |
| IDM                | SEND UPPER DISPLACEMENT Y  | 0100 | 0111 |
| IDM                | SEND ROTATIONAL POSITION X | 0100 | 1000 |
| IDM                | SEND ROTATIONAL POSITION Y | 0100 | 1001 |
|                    |                            |      |      |
| CDM                | RESERVED                   | 1100 | 0000 |
| CDM                | SEND VELOCITY              | 1100 | 0001 |
| CDM                | SEND ACCELERATION          | 1100 | 0010 |
| CDM                | SEND JERK                  | 1100 | 0011 |
| CDM                | SEND LOWER DISPLACEMENT X  | 1100 | 0100 |
| CDM                | SEND LOWER DISPLACEMENT Y  | 1100 | 0101 |
| CDM                | SEND UPPER DISPLACEMENT X  | 1100 | 0110 |
| CDM                | SEND UPPER DISPLACEMENT Y  | 1100 | 0111 |
| CDM                | SEND ROTATIONAL POSITION X | 1100 | 1000 |
| CDM                | SEND ROTATIONAL POSITION Y | 1100 | 1001 |

| Error Codes |      |      |
|-------------|------|------|
| Command     | Byte |      |
| RESERVED    | 0000 | 0000 |
| FIFO FULL   | 0000 | 0001 |